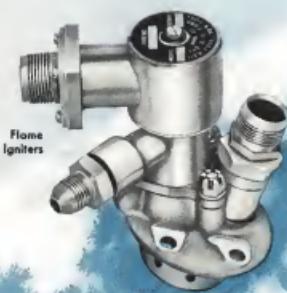


AVIATION WEEK

A McGRAW-HILL PUBLICATION

JUNE 13, 1949

BG for JETS...



Pioneering in the field of aviation ignition is a familiar role to **BG** engineers. Alert to the newest requirements, **BG** has developed and is producing spark plugs, flame igniters and thermocouples for all types of jets and rockets. **BG** engineers will be glad to tell you more about these products and to assist you in the development of designs required for your special applications.

FOR AIRCRAFT ENGINES . . . AIRCRAFT SPARK PLUGS

THE BG CORPORATION

New York 19, N. Y.

SERVING WORLD A



**Thompson Fuel Pumps
are STANDARD EQUIPMENT for
MAJOR AIRLINES**

**HIGH PERFORMANCE...LONG SERVICE LIFE
...LOW MAINTENANCE COST...** these are
the reasons the majority of airlines use Thompson
Engine-Driven Fuel Pumps.

They have found through experience that costly
flight delays due to fuel pump failures are avoided. At
regular overhaul periods, parts replacements have been
at a minimum. And when parts are needed, Thompson
delivers on short notice from a constantly maintained
stock. Factory overhauled service is also available.

Thompson Fuel Pumps, like all other Thompson

precision-built aircraft accessories, are backed by field
engineering service to quickly handle individual
airline needs and service needs. Airline operators, and
engine and plane builders are invited to see this
service, as well as the extensive development, testing
and production facilities at the "Taco" plant.

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**AIRCRAFT
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FUEL BOOSTER AND WATER INJECTION PUMPS — FUEL INJECTOR VALVES — FUEL METERING — COMPRESSOR ACCESSORIES



OFFICIAL AIR FORCE TRANSPORT

They cut a lot of ice with Airlift pilots

AID was of success for the Berlin
Airlift was whether it could fly
enough tonnage during last Winter.
One of the biggest thrives was the
severeicing conditions common to
German winters.

To answer this threat, the Air
Force equipped an C-47s with B. F.
Goodrich De-Icers. One of them—
44-8035—is shown above. A weather-
station station was set up near Meach
where De-Icers were installed. Planes
were grounded until De-Icers stopped.

This prepared pad off. With
De-Icer coating the ice free wings

and engines, planes stayed on
schedule, pilots were able to deliver
record tonnages.

B. F. Goodrich De-Icers offer the
same advantages to airlines and
private plane owners. They reduce
delays, keep planes available
and provide added safety.

De-Icers are light weight and take
up little space for their plumbing.
They are operated safely—by cold air
under low pressure. They are easily
installed and low in cost. Tailor-
made De-Icer can be quickly installed
on any twin-engine or larger plane.

short-haul airline plumbing. Complete
De-Icer systems, including the basic
improvements, can be designed for
new models.

The De-Icer—sales promotional
device for surface leading edge pit
development—is another product of
B. F. Goodrich aeronautical research.
The B. F. Goodrich Company, Aeronau-
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SOUND CONSTRUCTION! SOUND QUALITY!

The NARCO VHF navigational receiver is made to meet your most rigid requirements. NARCO, now a byword in high fidelity VHF aviation audio equipment, is in the quality class of every pilot.

"QUALITATT CONTROLLED" NARCO units are designed and tested to fit handiest in most cramped places. NARCO is a true combination of performance, features and reliability under the most adverse flight conditions. True, NARCO simplicity and low cost make NARCO easy to operate, easy to key.

Also available, the NARCO VHF 6 channel transmitter, as well as the NARCO omni range converter, now in production. Write today for bulletin 285 describing NARCO VHF radio equipment.

**NATIONAL
AERONAUTICAL
CORPORATION**
WINDS FIELD • AMELIA PA.

AVIATION CALENDAR

- June 10-11—National Aviation Maintenance Technicians Conference, Atlanta University Center, Atlanta, Georgia.
- June 10-12—30th annual meeting, Aviation Maintenance and Manufacturing Assoc., Indianapolis, Ind., Indianapolis, Indiana.
- June 15-16—Annual State aviation meet, Rockford, Illinois, Rockford, Illinois.
- June 18—Third annual Air show, Jeffersonville, Indiana.
- June 20—Concord Blue Aviation Week, Colorado Springs.
- June 20-21—Annual general meeting of the Air Transport Association.
- June 20-21—ATAF regional general meeting, Novi, Detroit, Michigan, Woodward Avenue.
- June 20-21—Annual Aeromaritime Assoc. 25th Annual Meeting, Paris, France.
- June 20-21—Annual Aeromaritime Assoc. 25th Annual Meeting, Paris, France.
- June 25-26—French Institute of Naval Sciences Laboratory, establishment of vision, behavior by five-day technical seminar. Price per person during 25-26 June 17.50 francs. This international meeting is organized by the French Institute of Naval Sciences and the University of California, Pasadena, Calif. Dr. Powell J. H. Williams, director of public relations and advertising for Boeing Airplane Co., has been elected national chairman of the public relations advisory committee of AIA.
- July 1-4—Third annual aircraft maintenance & repair school of Pratt and Whitney, Inc., Chicago, Ill.
- July 1-4—Florida Auto. RR Show.
- Aug. 1—National Convention, Maritime Pilots, Florida, Fla.
- Aug. 10-12—Annual meeting, Wall Assoc. of University Administrators of Aviation Schools, State University, St. Louis, Mo.
- Aug. 21-25—LAA annual summer meeting, Salt Lake City, Utah, Los Angeles.
- Sept. 4-6—1961 West Coast Industrial Maintenance Conference, Burbank Airport, Calif.
- Sept. 5-6—Annual conference, Petroleum Refiners Association, Indianapolis, Indiana.
- Sept. 7-8—International conference of Petroleum Refiners Association, Brussels-Belgium.
- Sept. 8-10—Annual meeting, Florida Aircraft Constructors Group Chapter and Central Florida Chapter, Orlando, Fla.
- Sept. 8-10—Annual craft plan and inspection conference, National Association of Flight Testers, Inc., Headquarters, Toledo, Ohio.
- Sept. 8-10—6th annual meeting, Florida Aircraft Constructors Group Chapter and Central Florida Chapter, Orlando, Fla.
- Sept. 11-12—6th annual general meeting, Biggs, Fla.
- Sept. 11-12—Second annual meeting, Airline Dispatchers and Administrators Assoc., Atlanta, Georgia, Hotel Georgia, Atlanta, Ga.

PICTURE CREDITS

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WIRE

AW-F-5b Specification
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|---------------------|------------------|
| 8 ohms per 100 feet | (Revere WI-2660) |
| Class A | (Revere WI-2660) |
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| Class C | (Revere WI-2660) |

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|---------------------|------------------|
| 8 ohms per 200 feet | |
| Class A | (Revere WI-3650) |
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| Class C | (Revere WI-3650) |

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| Class A | (Revere WC-1660) |
| Class B | (Revere WC-1660) |

* * *

As a further protection at elevated temperatures, the above Chromel-Alumel wires are furnished with a self-expanding under shielded insulation jacket.

Write for further details on the above wires and the following Revere products: Fuel Thermometers, Thermocouples for accurate temperature determination, and probe tubes for pressure measurements.

Revere
CORPORATION OF AMERICA
WALLINGFORD 2, CONNECTICUT

NEWS DIGEST

DOMESTIC

Strato-Fighter Inc. C-46 believed to be carrying 51 persons crashed in the waters off San Jose, Puerto Rico last week, with a possible loss of 54 lives.

Dr. Royal Weller, chief of the engineering department of the Naval Ordnance Test Station, has been named chief scientist for the Naval Air Test Center, Patuxent River.

Fomal election of Adm. DeWitt C. Ramsey, USN (Ret.), in president of the Aircraft Industries Assn. took place at the recent annual meeting and assuming of the AIA board of governors at Wallingford. Mr. Harold Meissfeld, director of public relations and advertising for Boeing Airplane Co., has been elected national chairman of the public relations advisory committee of AIA.

Wright Brothers papers have been given to the Library of Congress as a donation of the estate of the late Orville Wright.

Earl F. Ward, technical assistant, antenna operations service of CAA, died recently in Chicago. He was 51. He had been working on a plan to eliminate landing accidents at major Chicago airports.

A DC-3 flew 2775 air miles from San Francisco to New York, with a robust pilot at the controls for the entire trip. It was testing equipment developed by the Federal Telecommunications Lab., Lakewood, Colo., with assistance from Minneapolis-Honeywell Co.

USAF announced that the number of American airmen in Britain will be raised from 8800 to 12,000, on the assumption that the Berlin airlift will continue. If it stops, USAF says the men will not be needed.

Airlifts, Inc., proposed plane-loading subsidiary of Consolidated Vulcans, has not applied to the Reconstruction Finance Corp. for a loan according to W. C. Rodriguez, vice president.

Jeanne A. Bellis, former news editor for Arthur News, predecessor to AVIATION WEEK, died in a Washington hospital. A Washington newspaperman, he also had been a writer in Chicago, New York and Paris.

FOREIGN

Former Airlines Co. Ltd. appointed John Nasar Dossani, former wing test pilot, replacing Peter H. Davis, killed in the recent Cyclone crash (AVIATION WEEK, May 9).

INDUSTRY OBSERVER

French Aviojet Corp. is designing a twin-engine model of its five-passenger Boussole. The proposed model would be powered by two 185 hp Continental engines housed in nacelles. Very negative price is now being discussed at around \$130,000. This project should not be confused with the experimental two-engine Boussole using two engines geared to a single propeller.

American Airlines is studying possible substitution of the four-bladed Curtiss Electric propeller used for the wartime P-47. If the three-bladed propeller now used on its DC-8 and Convair Liner, Bazaar is the large number of propellers already being discussed on the two AA transport types. American and Curtis are still baffled on the cause of the cracks but are building up a voluminous case history on the subject. Curtis' stock about 100 flight hours to see if initial repairs to the hub surface

are safe and GCA experiments for bringing in place to a corner check at 1000 ft. Initial tests indicated GCA can be used successfully to speed corner pass. Landing during bad weather and at night, Navy will also experiment with the approach control tower now in use at CAA's La Guardia field control tower to see if it can be applied to corner problems.

GoodYear Rubber Co. will find increased Navy interest in the new experimental blimp design. Navy believes the blimp is still very much in the early subsonic weapon system partly because it is the only successful vehicle to date for a special type of anti-submarine detector capable of penetrating the depths at which new type subs can now operate. Use of the blimp based on current air sea has so lengthened its range and increased its endurance. Recently, converted blimps have flown continuously for more than 90 hours, refueling and changing crew at mid-point over the ocean.

Military Air Transport Service is finding that its switch to bigger transports is paying off in operating costs. Maintaining a fleet of 100 aircraft costs a journal of C-46 aircraft, old and new, a half billion dollars a year. The C-46, Lockheed C-121A aircraft from Wright-Patterson AFB, to Frankfurt and five trips in the same time it took a C-46 to make 10 flights. The C-121 also carries 35 percent more passengers per trip, raising its overall efficiency equivalent to that of two C-46s. Maj. Gen. Luisino S. Reyes, MATS commander, estimates that the seven C-121s now in use are saving the work of 20 C-46s.

American Overseas Airline is modifying its Model 941 Constitution to handle a total gross weight of 96,000 lbs. This is 1000 lb. over present gross allowed by Civil Aeronautics Administration.

Canada will spend between \$6 and \$15 million annually for a number of years to build a road network to cover its major industrial areas and population centers, according to Canadian Defense Minister Brooks Clouston. This is in addition to the road network planned by the United States.

North American's NAVY, flying guided missile, is 14 ft. 6 in. long and weighs 175 lb. It is 15 inches in diameter. It is fired from a 125 ft. launching tower and reaches an altitude of 50,000 ft. on its initial tour. The X-15 Air Force is scheduled to enter production quantities of the NAVY for use in training missile launching crews.

British Helicopters Asia is working on plans for developing a fleet of 16 and 23-passenger helicopters to link airports in the London metropolitan area with the cities of the city. Flying platforms along the Thames river are planned for the downtown landing spots.



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Vol. 50, No. 28

CAA Chief Rentzel Appoints 'Cabinet'

Four relative newcomers to agency get highest jobs directly under administrator.

By Alexander McFarley

Reorganization of CAA last week put four men, all relative newcomers in the big federal agency, into the key top-level administrative posts under Administrator Donald W. Rentzel.

The new *Cabinet* includes:

- Donald W. Nepp, deputy administrator for operations
- Franklin B. Lee, deputy administrator for planning
- Edward M. Stachula, executive assistant to administrator
- Capt. Charles F. Hause, director of airways

Other Washington CAA staff officers and most top agency officers removed in the break of CAA administration, although several of these posts have been shifted in the eight months reorganization period.

► **Airport Director**—Philippe Moret is director of airports. His deputy, Judge N. Smith, has been transferred to deputy regional administrator at Atlanta and St. Louis substituted within the Office of Airports.

F. S. Hendley continues as director of western airways; Donald Stuart as di-

rector of technical development; Robert Eloff as general counsel; and Ben Stern as director of aviation education, with Wiley Wright, as previously reported, heading the new Office of Aviation Development.

► **Navy Post-Navy**: The new post, in charge of budget, personnel and management audits, has definitely the No. 2 man in CAA, resulting in the apparent transfer of the former senior deputy administrator, Lester Lee. The new manager announced of Lee's transfer has been with coordination of planning of Washington after program and evaluation of regional performance.

Neppe had been executive assistant to Rentzel since August, 1948, coming to CAA from Air Transport Assoc. He arrived in Air Transport Command from 1942 to 1946, intervening his service as a lieutenant colonel and executive operations officer at ATC headquarters. Previous to that he was executive assist to the ATC chairman and as director of the CAA chairman and as director of ATC.

► **Stachula Shifts**: Stachula goes to his new post from that of director of liaison administration which is being consolidated under Nepp, with other offices. Stachula had previously served as executive assistant to former Adminstrator T. C. Wright and formerly served with Air Technical Service Command at Wright Field.

Capt. Hause who is on loan to CAA from the Navy was special assistant to Rentzel on air navigation problems before taking over his new post. He is plain William E. Hause who has been transferred to regional administrator at Seattle. Hause replaces Robert Boggs who will be promoted to Washington to take a post yet to be announced.

► **Airways Dept.**—The new airways head occupied previously the now vacant executive assistant post at CAA with the responsibility which in broad plan on the development of air navigation aids under the long-term RITA program. He came to Rentzel after serving as deputy chief of Navy communications, and was command communications officer of U.S. seaplanes based from Tamsa to Okinawa.

Assisting Hause in airways will be John Beaman, former CAA regional administrator at Honolulu, transferred to the newly created post of assistant to the regional director of airways.

The new regional director is Al S. Koch, who has held a series of other high level CAA offices, into the new job of international regional administrator. Since his recent assignment Koch had moved successively from director of programs planning and evaluation, then assistant administrator for safety regulation, and from director of field operations. The field operations post involved CAA international activities. Koch also served as a lieutenant colonel in the Air Force in World War II.

The new regional director's office will coordinate all international conferences for international field operations.

► **Staff Schools**—In an effort to get higher skilled administrative work in the agency, Rentzel has announced plans for a staff school to be conducted initially in Washington or Oklahoma City.



Donald W. Nepp



Charles F. Hause

for uniform training in good defensive tactics procedures.

Responding to some industry complaints about lack of readiness by aircraft type representatives, the Washington office will add representatives to serve as regional certification boards which will act as aircraft type approvers.

► **Airport Aid**—Additional charges designed to supply further the CAA airport aid program also were announced. In general these charges give additional power to regional offices, although it is stated that the Washington airports offer ultimate authority policy control over the agency.

TWA's 20 Connies Will Replace DC-3s

Lockheed Aircraft Corp.'s total Constitution sales rated to 250 when TWA purchased 20 of the Model 749 transports for \$20 million.

TWA, in its eagles, together with others now on the market, can now continue the Lockheed's Constitution production line through 1950. First delivery on the new contract with TWA is expected next April.

► **DC-3 Replacement**—TWA's Constitution fleet will be increased to 55 when the last of the 20 are received around January, 1950. A number of TWA's domestic DC-3s will be retired by the new Connies, and the carrier's eastern DC-3s probably will be put in all-cargo service.

No plan of extensive initial financing of the new aircraft was made. TWA is expected to receive its first 21 aircraft in 1948 at approximately the full 15-plane fleet if available. TWA has not yet planned to re-engine replacements for aircraft more than 60 DC-3s.

► **Pearlman-Tamm-Ralph**—S. Duran Tamm, TWA president, and his company would pay 25 percent in cash out of its own funds on the \$20 million Connie order. Renegotiations will be handled by a group of men headed by the Mellors interests in Pittsburgh.

In announcing the Constitution order, Duran predicted that his company's passengers between would increase 15 percent this year and increase further in 1950. He reiterated that he does not expect the U.S. to adopt a "closed international air transport system."

Besides the 55 planes bought by TWA, Lockheed's sales of 200 Constitutions include orders from Eastern Airlines, Pan American Airways, KLM, Air France, BOAC, Air India, Lufthansa, Aeroposta Brasileira, South African Airways, U.S. Air Force and Navy. No compensation. Boeing has added 55 Stratocruisers to the Air Force. Douglas has sold 549 DC-3s to the winter



B-36 ON RACK. While Washington prepares to look into procurement of B-36, Wright Field is continuing state tests on last production model of the bomber.

B-36 Probe Widens in Scope

House committee investigation to include Navy's supercarrier plan; Syrington denies Van Zandt charges.

Congressional investigation into the U.S. Air Force B-36 program proceeded last week to broader lines in a general hearing on U.S. military policy.

Specific developments included:

► **Probe to Include Navy**—Investigation of the Navy's \$500-million supercarrier program and the nature of the "planning, managing" against the B-36 in the probe by Rep. Carl A. Vinson (D, Ga.) indicates that these two subjects on the probe agenda was anticipated as giving the USAF an opportunity to launch a counterattack against the Navy, which USAF officials, in the source of much unofficial criticism of the B-36 in particular and strategic bombing policy, have drawn no objection to.

Meanwhile action on two important items of military legislation awaited outcome of the B-36 investigation. Indications were that neither the 70 group Air Force bill nor the Senate Armed Services Committee's bill on the Strategic Bombing Survey would be before the Senate or House before the Vinson group would be reported out of committee until all the evidence uncovered by the B-36 investigation was on the record.

► **Senate Objects**—Eugene R. Levin, Committee Chairman, Rep. Adolph Sabath (D, Ill.) and Rep. Eugene Corr (D, Ga.), objected strongly to authorizing the B-36 investigation.

"An investigation is going," Van Zandt charged, "an important they do not deserve." Cor charged himself of having an investigation, as much as publicly withdraw his charges and publicly apologize. Sabath pointed out that "the charges according to Van

Committee are an evaluation of Navy fighter claims against the USAF intercontinental bombers.

John Chavis of Staff recommended against a public trial and instead that a closed hearing, evaluation of the B-36 and its mission, and the nature of the "planning, managing" against the B-36 in the probe by Rep. Carl A. Vinson (D, Ga.) indicate that these two subjects on the probe agenda was anticipated as giving the USAF an opportunity to launch a counterattack against the Navy, which USAF officials, in the source of much unofficial criticism of the B-36 in particular and strategic bombing policy, have drawn no objection to.

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Zandt himself are only based on rumors and newspaper stories."

Van Zandt noted the two Roles Committee by pointing that "the committee act separately and we during the course of our investigation to the separation of the armed services."

He argued that best way to quell them is "with the truth," and read a letter from Syrington (defining all Van Zandt's charges) concluding the investigation.

► **Probe Increases**—"We are going to find out where these statements come from and why," Vinson commented on the probe.

We all have the deepest confidence in the patriotism of Syrington, but his wrongdoing is vital to re-establish public confidence, which has been so diminished, in the military program," Rep. Clarence Brown (R, Ga.), a high ranking Roles Committee member declared.

Rep. Dewey Short (R, Mo.) said that the Armed Services Committee would "do its best" to "raise an issue of trust" and to defend the investigation.

► **Van Zandt Report**—Van Zandt reported that he "grew up with ample basic surface" war news officer in the last war, and knew firsthand that "it spelled success in the Pacific." Stating that he is "for strong national defense, particularly the Navy," Van Zandt commented that he now attacks Naval Reserve didn't work weekly, but emphasized that he has been a strong supporter of USAF's Strategic Air Command program.

He said that he has studied developments in the investigation for many years with Syrington, and that the "70 group" and the "70 group afterburner bill," observed that "targets and latitudes will not get to the B-36."

Following is the text of Syrington's denial:

June 2, 1949

Honorable Carl Vinson
Chairman of Representative
Ways and Means
Dear Mr. Chairman:

The Air Force kindly conveys to the resolution which you have offered calling for an investigation of the B-36 and "70 group" matter. You may be assured of full cooperation at the disposal of the investigation.

The B-36 is a vital job to our national security mechanism. The public and the Congress should be fully informed concerning it within such security limits as may be practicable. The investigation which has been developed to broaden it must therefore be objective, precise if correct, the technical use to which it is to be put, the sources from which were derived, the decisions that were made, and the sources back of those

On May 26 Mr. Van Zandt made a speech in the House of Representatives in probing certain accusations statements at



LONG RANGE BOMBER

New flight plane at A. V. Roe's Moseley, England. Casto was developed from Avro's Lincoln, but has undergone several modifications. Casto is designed to cruise about 6500 miles at better than 300 mph.

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Say Canada Bests U. S. In Horsetrade

Even the U. S. is being ushered in negotiating an air transport agreement with Canada, which has already negotiated last week, in both radiatory and congressional quarters, when terms of a new bilateral pact with Canada was disclosed.

The agreement grants these concessions to Canada:

- A route between New York and Montreal directly paralleling a link now operated by Canadian Airlines.
- Traffic rights at Honolulu as a through route from Vancouver to Honolulu.
- Traffic rights at Tampa-St. Petersburg, Fla., on a through route to the Bahamas and Caribbean points.

For this, the U. S. obtained:

- Continued traffic rights at Gander, Newfoundland, on the trans-Atlantic routes of Pan American Airways, American Overseas Airlines and TWA.
- A route from New York to Toronto directly paralleling an existing Canadian link.

• A route from Gander, Nfld., to Edmonton, Alberta, together with traffic rights at Edmonton on Northwest Airlines' link to Alaska and the Orient.

Canadian Airlines, which will see how the competition evolves in next month's labeling of the new agreement "will seriously consider adding to the aviation."

Rep. Carl Shuster (D., Calif.) charged the pact "exchanged east U. S. bases for one Canadian rabbit." He suggested revising the law to provide that such agreements must receive congressional approval before they become effective.

► **Explorers To Senate—See Edges Johnson (D., Calif.) chairman of the**

Senate Interstate and Foreign Commerce Committee, called on State Department and Civil Aeronautics Board officials responsible for the pact to explain its provisions to his committee despite some doubt about its finality.

Colonial Airlines president Raymond J. Jones, and other managers, came to a Montreal news conference to assure the American taxpayers more than \$1 million annually in additional subsidies.

Tourism Canada Air Lines will probably operate the link with four engines North Star Colonial uses.

Over 60 percent of Colonial's revenue comes from the New York-Montreal route which is now subject to traffic diversion Japan, and the price paid by the Canadians for the valuable franchise is practically nothing. "This is the best deal," said Jones. "American can't go to Congress to protect their right."

► **Deutsche Transocean-Toronto** Canada Air Lines, which also operates services to London, may tap the last New York Europe traffic through the New York Montreal link.

CAB chairman Joseph O'Connell and Board member Ronald Adams, who headed the U. S. delegations which met with the Canadians, described the pact as "an excellent one from the American standpoint." They said it would have been jointly impossible to continue to let Canada fly from the route system in largest city (Montreal) and New York.

Trade, they pointed out, U. S. carriers will continue to get \$1 million in passenger traffic at Gander and much more of the business on the New York-Toronto run, where the Canadians have handled over 90 percent of the passengers in the past. "I won't consider that we give up more than we got," Adams declared.

► **Methods Defended**—The CAB members denied Colonial's charge that the negotiations of the American carriers in the negotiations—Stuart Taylor, Air Transport Area counsel—was so secret that he was unable to maintain contact with his principals, although the two Trans-Canada Air Lines men permitted to act in name of the corporation represented.

"Taylor was a full member of the U. S. delegation, and on one occasion was at the conference without his knowledge and association with him," Adams stated. He was perfectly free to comment with the carriers he represented.

Adams told AVIATION WEEK that other U. S. government agencies had not asked American negotiators to be liberal in granting Canada traffic rights to strengthen the Canadian dollar earning position. "Canada didn't get all the money it wanted, and we got a good deal," he said.

► **U. S. Head Fined**—American officials said that Canada had wanted to renew the former air transport agreement with the U. S. for about two years. Our government delayed as long as possible, realizing that the Canadians would request additional traffic concessions.

But the U. S. had fasted several months ago when Newfoundland became part of Canada. The Canadians promptly announced they would not continue U. S. traffic rights at Gander beyond June 30.

First York Moves to Boost Bell Holdings

First York Corp. wants to strengthen its investment in Bell Aircraft Co. by offering to buy 36,000 shares of \$14.50 per share \$2 above market price.

Letters have been sent to all Bell

stockholders urging them to accept First York's original offer to acquire 150,000 shares of Bell at \$13.50 per share in June, 1948. First York, with its affiliates, now owns 162,944 shares or approximately 37 percent of Bell's outstanding stock.

Acquisition of the additional 6,600 shares offered by First York, a member of the Equitable Corp. group, would half of the entire Bell share. Under the year's option, stipulated in the acquisition, the same option by trading other properties it owned for additional Bell shares, but the move fell through.

David M. Miller, president at First York, and a Bell director, said "we proposed for changing Bell's policies or management if picked confirmation." Lawrence D. Bell, manager of the corporation in 1937 and other officers were recently reelected to a regular board of directors.

Milner said first First York has had the most fruitful relationship with Louis Bell and he believes in Bell management and the acquisition of additional stock reflects our confidence in this relationship."

Bell added: "Our company's association with First York Corp. as a substantial stockholder has been most constructive and helpful. At all times Bell management has received full and understanding support in the operations of the company."

First York's letter said that tended will be reconsidered on the issue involved and that the offer will be good until the close of business June 27.

Boutelle, Flood Join Sherman Fairchild

Sherman Fairchild last week had an outside consultant to the management of Fairchild Engine & Airplane Corp. Richard M. Boutelle, president and general manager of the Hagerstown Aircraft Division, and the other man-

agers of the corporation board of directors were by paying the Sherman Fairchild group which is preparing its own slate of directors at the annual meeting July 6. He was promptly ousted from his job, but remains on the board and still is on the opposition slate of directors.

► **Then Flood-Nest**—After A. E. Flood, a native competitor at Hagerstown, disclosed he disagreed with Sherman Fairchild's stand and would permit his name to be cast on the opposing list of directors. He too, was dismissed at the meeting.

Three other competitive officials were selected by the ten members committee of stockholders voting with Sherman Fairchild. They refused to join the opposition.

► **SEC Delays**—By the middle of last month, most of the other members of the stockholders committee for director had not been developed pending approval by the Securities & Exchange Commission of the material which the stockholders committee intends to use in selecting proxies for the meeting. Approval was expected late in the week and with it, the announcement of the names of the nominees for election.

The committee of stockholders consists of Sherman Fairchild, Clevenger, Milner, Mr. Andrew Bunting, Robert Clegg, Edgar F. Foss, director of W. R. Grace & Co.; Lester M. W. Balkin, Washington, D. C., industrial consultant; Beckwith Havens, former Fairchild planes distributor; Martin E. Glensmith, president, Penray, Parker Corp., Inc. Ross Pfeiffer, electrical engineer; Alfred Speer, treasurer, Merchants Credit Corp., Philadelphia, Pa., and Raymond E. Merrett, New York City.

► **Boutelle, Flood**—Boutelle was first offered to represent opponents to the management plan of F. Charles Ward, Jr., vice-president of Fairchild. It was then noted that he participated in the fight by Sherman Fairchild, who says his position plus

should be company-wide and not just for executives.

Hagerstown employees last week were called in "Boutelle Day" to honor the general manager for his success in keeping the division of press operations during the slack pre-war days.

Colonial Strike Ends

A sudden Memorial Day weekend strike of 150 Colonial Airlines mechanics, radio engineers, cargo loaders, clerks and cleaners ended last night. All were members of the Transport Workers Union of America.

Last night was wage averaging of from 16-20 cents an hour from solid basic holidays a year, average pay per 80-hour week employment. Terms of the strike agreement had dictated that First York, Judge Fairchild, acknowledged the company had made reasonable offers.

The strike, which began while Colonial was operating a peak holiday schedule, forced 100 of the carrier's officials to handle baggage, cargo and engine checks at La Guardia Field so that service could not be interrupted. Among those who donated workdays were Russell T. Davis, vice-president-operating; Alfred M. Braden, Jr., vice-president-passenger; Sherman Fairchild, vice-president-financial; George B. Jones, acting chief pilot; William McTague, chief dispatcher; and Jack Beach, station supervisor.

Personnel contract between the union and Colonial had expired May 1. Negotiations for the new contract begin April 25.

Davis informed AVIATION WEEK that before the strike began, "it had looked like negotiations on the new contract would be settled in a day or so."

Then ensued the main walk-out after negotiations became僵持 and bogged down.



LOCKHEED AIRCRAFT CORP.'S production jet fighter, XF-90, takes off for first flight at Marine ABW test field. Tony LeVier left the job behind in a hasty manner to attain speed and altitude quickly

in one engine went out. After a 37-minute flight, LeVier squared the plane's performance, switched engine controls, within seconds of 1 mph.

AVIATION WEEK, June 23, 1949



HEADON VIEW OF BRITAIN'S FIRST JET BOMBER

British's twin-jet medium range bomber, the English Electric A1, is shown as the wing. The A1 is reported to exceed 500 mph. Actual performance figures are absent.

Craft, which has been entered into quantity production, made its first flight last month.



TURBOPROP TRANSPORT

Aerospace **Whitworth's Apollo**—first commercial transport designed especially for fast in-prog power-in flights at this new speed

SEC Reports Stock Transactions

Purchase of 2100 common shares by Bell Aircraft Corp. stock by the First York Corp., New York City, is reported by the Securities and Exchange Commission as its last major stock transaction, effective April 1 to mid-May. The acquisition brought the firm's holding in Bell to 152,544 common shares.

Other aviation transactions reported in the news were:

• **Brock Aircraft Corp.**, sale of 2000 shares by Charles Eustace of Wichita, director, leaving a holding of 3830 shares.

• **Curtiss Wright Corp.**, sale of 2000 common shares by Daniel M. Shaffir of Philadelphia, director, leaving a holding of 30,000 shares.

• **National Airlines**, purchase of 1400 common shares by Joseph Merrick Jones of New Orleans, director, making a holding of 2400 shares.

• **Fairchild Aerospace**, sale of 100 capital shares by Franklin C. Hall of New York City, director, leaving a holding of 635 shares.

• **Piper Aircraft**, purchase of 100 preferred shares by William T. Piper, president, making a total holding of 9600 preferred shares and 364,276 common shares.

• **Bennich Meiss Co.**, purchase of 1000 common shares by the U. S. Fid Co. of Richmond, Va., making a total holding of 678,760 shares.

• **Spart Corp.**, sale of 400 common shares by Thomas Dier of New York City, director, leaving a holding of 300 shares.

• **Tokon Rollco**, **Boeing Co.**, sale of 400 common shares by Robert Bowen of Clinton, O., director, leaving a holding of 3000 shares.

in its present form. It is designed to cruise at 365 mph. at 20,000 ft. First flight was made in April.

Decision of the US Circuit Court of Appeals, handed down recently, The verdict upholds the patent maintained by Boeing from the time the strike began in April 1948.

It also upholds an order of the National Labor Relations Board, issued in November, which:

- Found Boeing guilty of refusing to bargain.
- Directed Boeing to begin with the name—Automotive Mechanics Union, affiliated with the International Assn. of Machinists.

- Required the reinstatement of all strikers.

The court's decision comes on an appeal taken by Boeing. NLRB plans to carry the case to the Supreme Court.

If it stands, the decision opens the door to the Transportation Union, AFL, to challenge the bargaining rights of the Auto Mechanics. The Transport union has been organizing Boeing employees through a new Seattle local. There has been no longshoreman in the plant for the past year. The Auto Mechanics returned without a contract in mid-September.

Unless the Circuit Court is reversed, both the Auto Mechanics and the Transporters are expected to try to establish themselves in Boeing's plant for the approximately 13,000 production and maintenance employees through an NLRA election.

Following the decision Auto Mechanics filed a petition with the NLRB for a representative election, which could be held within two months if all parties concerned find themselves in agreement.

The present indication is that the Auto Mechanics, which has represented Boeing workers since they were first organized, has a majority of the workers at the plant.

Boeing Strike Illegal

Last year's five-month strike at Boeing's Everett plant, which has represented Boeing workers since they were first organized, has a majority of the workers at the plant.

Officials Named To Munitions Board

Ronald C. Cusack, president of Thompson Products, Inc., Cleveland, has been chosen industry chairman of the Munitions Board. General Industry Advisory Committee, which also serves as an liaison group to the National Security Resources Board.

Malvika P. Ferguson, president Bechtel Nuclear Corp., is named chairman of a subcommittee to study subcontracting relations in connection with industry mobilization. L. C. Goss, vice-president, General Motors Corp., heads another sub-committee studying security problems in individual plants.

Proposed to conduct "war games" among selected industry units to prove readiness for prompt expansion, another proposal for a joint government-industry program, will be made to the Senate.

Major Gen. Patrick W. Timmons, USAF, a Government Chairman, Donald F. Capponi, Chairman of the Munitions Board, welcomed the members. Other members and alternates were Lawrence Cohen, president, Consolidated Vultee Corp., San Diego; J. B. Kieckhefer, president, North American Aviation, Inc., Los Angeles; G. P. Tarter, Grumman Aircraft Engineering Corp., Bethpage, N. Y.; Harry T. Rowland, vice-president (aeronautics) for Clark A. Morton, president, Glenn L. Martin Co., Baltimore; Md.; J. Curran Wood, president, Fairchild Corp., St. Louis; George C. Hartmann, Vice-Chairman, McDonnell Douglas Corp., St. Louis; Thomas Kowalek, Guidance Analysis Corp., Akron, C. C. Penrose, executive assistant to the president, Curtiss-Wright Corp., Wood Ridge, N. J.; H. M. Horner, president, United Aircraft Corp., E. Hartford, Conn.

Senate Appropriations Committee last week lowered Civil Aerostatics' fiscal 1959 allocation for research and development by \$10 million.

Although Congress did not CAA's initial allocation for fiscal 1959, the \$156,000 cuts and \$13.3 million contract authorization allowed by the House, the Senate group added the \$9 million in contract authorization. CAA had requested \$50,195,000 for the research program (\$21,650,000 cuts and \$26.5 million contract authorization).

Senate group opposed a CAA total appropriation of \$387,045,000, including \$139,244,000 in cuts and \$67,580,000 in contract authorization.

Other changes by the Senate committee in the House-approved 1959 fiscal year budget for CAA and the Civil Aerostatics Board:

- CAA funds were increased by \$139,930—from the \$132,100 House figure to \$152,780,000. The Board would have to reduce its present staff by 31 under the House allocation. Original CAA appropriation request was \$1,580,000.

- **Wingsfield National Airport** was authorized for \$175,000 (not included in the House budget). In addition to the \$21,500 approved by the House, making a total of \$246,500.

- **Airport monopolies** cannot be established by heads of state-owned CAA. A provision of the 1946 fiscal act prohibits airport operators from having exclusive concessions for rate of service fuel and lubricants.

CAA allocations for the next fiscal year approved by the House and the Senate Appropriations Committee are:

- **Aviation Development Board**, \$7 million (\$5 million cuts and \$2 million contract authorization); ANGUS originally asked for \$10 million to begin development of all-weather arrays and twice-speed equipment, but later accepted \$7 million.

• **Airport development**, \$51 million (\$18.5 million cuts and \$16.5 million contract authorization), a reduction of \$10,000. Bid administration for the \$17 million cut request of the Budget Bureau.

- **Airline airports**, \$8.5 million for international ports of Anchorage and Fairbanks—the amount requested by Budget Bureau.

- **Technical development**, \$1,158,000—a reduction of \$115,000 in the \$1,300,000 Budget Bureau estimate.

- **Washington National Airport**, \$1,250,000 for operation and maintenance—a reduction of \$70,000 in the \$1.3 million original CAA proposal.

- **Stations and expenses**, \$95,402,307—a reduction of \$3,391,895 on the \$97,700 bid asked by Budget Bureau.

CAA Funds Boosted

By Senate Committee

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Chicago Air Show

By far the best U. S. Air Force tactical types available by jet fighters and a large ground display of historic U. S., Japanese and German planes will feature the National Air Show to be held at Chicago's O'Hare Airport July 5-6.

The air fair is organized by the Air Force Association, part of its Third Annual Convention to be held in Chicago July 4-6.

Flight display will include a special run by North American F-100s, current leader of the world speed record; appearance of a squadron of Convair B-58 bombers; aerobatics and simulated combat by Republic F-84 and Lockheed F-90 jet fighters and aerobatics by a Royal Canadian Air Force team flying de Havilland Vampire jet fighters.

Ground display will include captured German and Japanese equipment being presented to the National Air Museum and National Aviation Committee for America's exhibit "The story of flight."

McGraw-Hill Buys 'Airport Directory'

McGraw-Hill Publishing Co. has just acquired "The Airport Directory" from Hove Publishing Co., it was announced last week by Robert F. Haug, publisher of AVIATION WEEK.

Founded in 1912, the Directory is published annually and is the national authority on airport facilities for the transportation. It was previously published by the magazine *Airports and Air Carriers* which has now been discontinued. Publication of the Directory will be continued by AVIATION WEEK.

FINANCIAL

Airlines Continue Debt Retirement

Through sinking funds and similar devices, carriers are improving their capital structures.

Despite the financial burdens of the carriers, they are managing to keep up debt reduction actions, which augments their capital structures.

This is being done through the operation of sinking funds and related senior-subordinated payments.

► **Capital Solving Problems**—An east coast airline's financial operation of that name has recently been completed by Capital Airlines. Under premises by a restructured cash payout, the company was placed in a position to bring all major financial pressures up to date.

Under the terms of the agreement securing its original \$18 million debtors, the carrier has been required every May 1 since 1947 to pay into a sinking fund for the retirement of the bonds in amounts not to exceed \$300,000 annually plus any unused dividend credits or interest with credits of previous periods. Only \$1,000,000 of debtors were retired in this manner in the year 1947.

► **New Connect**—The extensive new plan presented the company to place the sinking fund in a trust fund and to convert debtors. A total of \$1,371,848 was paid to the trustee for this purpose as May 1, 1949.

Rather than attempt to postpone debentures in the open market, Capital elected to request tenders from the bondholders. In this manner, the advantage was defended with the company at the bondholders were forced to give the prices at which their debentures would be accepted. In effect, they were bargaining with the bondholders, which resulted in retarding a steady upward market move in the face of increasing losses heavy requirements for investment.

► **Retirement of Profits**—The net result of this operation permitted Capital to retire \$2,163,000 principal amount of debentures at a substantial discount with a cash outlay of only \$1,353,003. A gross profit of \$85,915 was realized in the transaction.

Of greater consequence, is the write off over all reduction in Capital's debt, and improvement in its capital structure. Total debenture holdings now aggregate \$7,055,820. Further, the company's cash had, moreover, outstanding, has now been reduced to \$2.5 million. As operations permit, it is

anticipated for Nov. 27, 1949, each holder having had payments are received for 1950 and subsequent years, unless modified.

Ranking ahead of the Equitable debentures are several notes issued to finance the major part of the carrier's aircraft.

On Dec. 31, 1948, there were more than \$17 million of such notes outstanding payable in \$4 monthly installments.

These notes are now being refinanced on schedule and serve to improve TWA's capital in the aircraft securing these aircraft.

► **Northwest Finance**—Northwest Airlines has put to place its finance on a stable basis. After a delayed stockholder approval of a \$12 million credit to be advanced by the Reconstruction Finance Corp., the Civil Aeronautics Board has yet to give its regional can seat to this loan. If approved by the Board, the RFC has will stand ahead of the \$3 million bank credit obtained by the carrier in April, 1947. Originally, a total of \$18 million was to be made available to the board, but they were able to take advantage of certain provisions and kept the amount down to \$9 million as of April 10, 1949.

In addition, United sold \$72 million in 20 year 4% patient debentures to two insurance companies. A ranking third operation is also disclosed in this matter with \$120,000 paid toward this program during 1948 and another \$340,000 stated for retirement this year by the corporation.

► **TWA Adjusting**—Transcontinental & Western Air has operating results being achieved at the present time resulting in large increases, being devoted to help solve the problems of the financial policy of the past. These have been discussed in earlier issues of Aviation Week.

► **Dep. on Value**—Last year, the National Association of Insurers, Committed a sum of \$6 million on the dollar for TWA's debentures to the hands of Equitable Life Assurance Society of the United States. At a recent meeting a subcommittee of this association made a new appraisal and recommended that Equitable now carry these debentures at only 90 cents on the dollar.

The subcommittee's action will not become final until approved by the full association at the June meeting of the fall association. In the past, however, the value of these TWA debentures has been held at 95 cents. Further, there were \$59 million of these TWA debentures outstanding. A sinking fund program of \$1 million was scheduled for May 28, 1949, with another payment of the

—See Attached

AVIATION WEEK, June 13, 1949

New Jet Engine Oils



Another PLUS for Socony-Vacuum!

A PLUS in aircraft lubrication since the Wright Brothers' first engine, Socony-Vacuum continues to keep pace—providing jet engine lubricants—developing oils that surpass Air Force Specifications—and in the latest jet fighters and long-range jet bombers.

Latest of these new oils is Mobil Aero Multi-

purpose Oil No. 1. It is refined from the finest crudes—has high cold-flow stability, minimizes the protective body at high operating temperatures, flows freely at 30°F lower temp.—two important features needed for turbo-jet engines.

Aviation benefits from Socony-Vacuum's advanced research and 80 years' lubrication experience!

**Widest Wingspread
ON U.S.
AIR LANES—
Flying Horsepower**

Mobil
AERO
AVIATION PRODUCTS



Modern INSTRUMENTS FOR Modern AIRPORTS



Barry-Dyer Model Type Indicator
for wind speed and direction.



Windial Indicator with dual dial
designed especially for airport use.

aerovane [®]

Red Recorder provides a permanent chronological record of wind speed and direction.



Two new wind systems — as readers as transmitters—Are available for indicating, recording, or both—Windal for indicating only—both available for readers air base operators.

Each system operates on a different principle for remote transmission . . . both incorporate the new Bendix-Pries variable propeller as preference to hemispherical or canard caps used with older instruments.

Bendix-Pries variable propeller of rotating aeronautical instruments especially designed for aircraft offers unique advantages in Wind Speed and Direction, Air Density, Pressure, Temperature, Relative Humidity, Barometric.

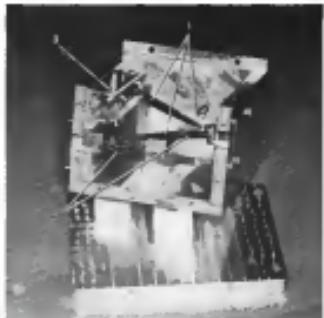
BENDIX
FRIEZ

FRIEZ INSTRUMENT DIVISION OF

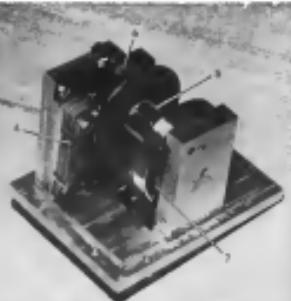
BALTIMORE, MARYLAND



ENGINEERING



COMPACT 24-in omnidirectional accelerometer, designed in compact construction for operational aircraft, will give valuable G-force information for crash studies. Components are 1, blades with mounting holes; 2, plate dissipate; 3, trigger mechanism; 4, suspension; 5, nickel or polished chrome offering longer and stiffer torsion ratios; 6, winding passes; and 7, suspending wire.



Dishpates consist of two slightly curved metal plates mounted on a metal support so as to cause the plates to approach one another in a报复ive manner. When the plates meet, the device records the impact.

Another type of device developed by the Naval Bureau of Standards for the Naval Bureau of Aeronautics is a ring impact recorder. This measures rate deformations and gives peak G only, with no time record.

► **Cochrane-Stearns-Bates** and the **Air Safety Committee** of the Civil Aeronautics Administration are particularly interested in "hard" crashes. What happens when a plane is substantially demolished, yet all of the crew escape with little or no injuries? What occurs in apparently minor cracks where new surfaces suddenly come into play? Are there any weak spots?

It is believed that the new accelerometer will provide data to answer these questions by functioning as a regular memory installation in a large number of aircraft, so that mechanical damage occurring during normal operation may be analyzed with respect to G-force influence.

For that purpose, a gyroscope-type gyrometer has been built; highly sensitive, sensitive and delicate in reading, requiring an external source of power.

Philosophically employing the design is that since the aircraft moves in these planes, the device would have to be omnidirectional to be of value.

New Accelerometer Will Aid Crash Study

Navy research develops small, light, omnidirectional device as accessory for operational aircraft.

By Irving Stone

An omnidirectional accelerometer, a new development of the Special Devices Center, Office of Naval Research, promises to be a valuable contribution to aircraft safety.

Specifically designed for analysis of operational aircraft accidents, the device not only records G forces, but also time of their duration. Experience gained from its use may well lead to application of cockpit liquid, testing and structure, to minimize crew injuries.

The unit is self-contained and requires no external power or auxiliary equipment. It weighs only 3 lb., can be enclosed in a 21 x 21 x 3 in. case.

► **Accelerate Standardization**—In the past, attempts have been made to obtain data as "standardized" entries. But this procedure has afforded administrators artificially valid only under the particular conditions of the crash, and not necessarily representative of a field accident.

For that purpose, a gyroscope-type gyrometer has been built; highly sensitive, sensitive and delicate in reading, requiring an external source of power.

In addition, the new accelerometer will provide data to answer these questions by functioning as a regular memory installation in a large number of aircraft, so that mechanical damage occurring during normal operation may be analyzed with respect to G-force influence.

In reading the readings, a winding pressure is applied toward the reading drum until its gear meshes with the gear on the drum frame.

To lead under 30 mph, aircraft only flies twice the lift coefficient of the flying plane that lead at 30 mph. NACA has had several wind-tunnel tests and high lift devices, which compare with boundary layer control, would enable a high lift of this character.

Since all these have been known for years, some are used daily in the Armed Services—but not a single certified commercial plane today has incorporated it in any more than the most elementary stick features.

► **Wing Modifications:** It is further of interest that certain Langley research on high lift wing sections has been developed, particularly on low drag type

airfoils, to the lower Reynolds Number range of those to an aircraft, similar to the original aircraft speed range and not very much above. Some have been obtained which clearly demonstrate that creating a wing section with a laminar flow would be quite ready to give higher speed than now obtained for the same power and higher lift at greatly reduced leading speed.

At Langley laboratory, a Convair high wing airplane is being fitted with various wing configurations to study improvement of takeoff and landing characteristics. Boundary layer control will actually be installed as soon as possible with high lift flaps.

Research directed toward increasing useful load for personal owner-type aircraft is also being sponsored by the NACA at the Texas A & M Personnel Aircraft Research Center, under the direction of Fred Wicks.

► **Wind Tunnel Tests:** Next to the studies of development of the capability to fly in bad weather, bringing with it uncertainty is in making a schedule. This, in turn means that the aircraft cannot play on a definite workload with very degree of assurance, because if it runs into bad weather, the plane goes

The high problem is one that, at present, surfaces also are up against, but are of the series of rotation at least as to modern aircraft with complete controllability at a vehicle. This commercially important they must be followed with the added as to the airfoil itself. A balance of research must be done, but unfortunately, due to its great complexity, existing designs are very difficult to fly in these conditions.

This problem of stability is by no means a hopeless one. Basic solutions are at hand to enable the pilot to see what he is up against, and improving the cockpit with stability in particular a research problem on which NACA is steadily engaged.

► **Noise Factor:** A further limitation to wide use of aircraft is that it makes alighting and landing noise. This has been under investigation by NACA. Two year ago a static noise measurement of a simulated propeller was given at the Langley laboratory, and research has greatly extended this achievement.

A fundamental study of different airfoil types has been made with a laboratory setup, with controlled excitation of noise frequency and amplitude.

A special contract has been entered into and is currently in progress of being completed with the Aeropneumatic Research Foundation of Boston, so further static noise analysis can be made available. The NACA sponsored research has already made some extremely promising conclusions indicating that private plane aircraft noise at close range can be reduced to an acceptable level about which no committee could reasonably complain.

But the application of this to existing new certified personal aircraft products is lagging noticeably. Core interest factors is being displayed immediately and there is much dragging of the shoulders and discussing of the future as to early.

If it is costly, when public accepts it is likely to greatly increase the market for aircraft, chiefly because closer landing strips would be taken into account.

► **Fool-Proof Features—Flying charac-**

teristics of personal planes are not yet entirely foiled, particularly as to spinning and ground controllability. Research and development continues with the hope to avoid spinning characteristics, but not necessarily to avoid ground controllability, by NACA, and industry has made much of the data—largely based on the CAA's start requirements.

With the knowledge now available on this subject, there is an excuse whatever for a new design of plane to be a bad airplane. If it is, NACA has developed research procedures which would quickly cure it.

Spinability, a very serious item in the private plane when it tries to fly his plane in an inverted, is now the subject of continuing investigation. The results have already been obtained in flight test at Langley Field, indicating that focuson a device or control system can produce a condition of divergence when controls are free that may appear to the pilot to be a spin stability which actually is not present.

Further research on research areas includes flight investigation of inverted control surfaces and rubber control in order to explore further a two-control operation to simplify flying.

An additional element of control stability is being studied in the rear of the airplane which has high tendency to dive at slow speeds with increased control forces (pitch in to airflow and tail) to enable it to be flown in the slow regime with adequate safety.

For example, studies have been developed which give adequate lateral control as compared with full span flap and ailerons. And studies have been made of boundary layer applications to give control forces in surfaces subjected to very low speed air flow.

► **Undercarriage:** The landing gear of personal aircraft now has two further developments that could greatly control difficulties.

First is the renowned leading wheel, intended by certifying which CAA has given a great impetus to the development, and NACA tests indicate an almost practicability towards going against the wheel to land covered on one wheel first and to take off with no penalty, at all.

The second feature, not yet much developed but in the analysis stage, is one that would accompany the use of high lift devices to lift of long strides from the ground. Landing with high lift configurations at high angle of attack on glide paths with no nose up at all, still required for landing and since landing would be reduced greatly.

► **Cockpit Obstruction:** All these features are indicated developments that could be extrapolated from research now completed or in progress. These would in-

clude a personal plane that could be operated with much greater scope in to where one could go, since greater use of controllability, and so forth. It would be easier to fly, safer to land or reposition closer to meet other more difficult wind and weather conditions of the CAA's start requirements.

With the knowledge now available on this subject, there is an excuse whatever for a new design of plane to be a bad airplane. If it is, NACA has developed research procedures which would quickly cure it.

It is to be noted, however, that less time is needed to reach that market. There are many new customers not at the point interested in the generally certified personal aircraft, and who will find the CAA's spin requirements too restrictive in the short of great market, because of the totally new fields of application that are opened up.

► **No Spin Specification:** A very important point, however, must always be kept in mind—the plane need not be slowed down in its cruising speed by virtue of adding it with these new features. Because history has shown and continues to show as the best and fastest acceptance of the left control that an approach periodical to the right in order to take off in ten of other vehicles is that they are taking off at high speeds.

From the existing need of 100 mph coming at our excellent Roosevelt

Nixon and other types is not enough. The private owner really wants a noiseless, easy-to-fly, maneuverable craft that will fly from zero to 100 mph.

► **Conclusion:** The small craft, and at the same time the market will be limited that we have all experienced these obstacles as early aircraft development. This means for selling aircraft only because they are cheap and not because they can give a result that we can use, at least in my opinion—a completely false path to profit.

► **"Helophane":** It is encouraging to know that the recent announcement of the development of their experimental plane, the "Helophane," by Gossage and Bellinger is one of the first important efforts to incorporate many of the above desirable features. The "Helophane" as they call their new aircraft, can take off in the snow in even less distance than it can land.

This is in contrast to the much earlier Carter "Tanager," Guggenheim Trophy winner of about 70 years ago, which required three times the landing roll distance to take off.

The Koppes Bellinger plane, as far back as date has taken of it, has in a ratio and climbed over a 10:1 distance in the air, and has been able to land on the snow slope in reverse at about 30 mph. And while during that the nose is entirely acceptable because



THEIR'S A PLACE FOR EVERYTHING

Maintenance "In-between" time for Air Lugs planes at Northolt Airport, London, England, is claimed to have been cut 25-30 percent with the help of this mobile service unit built out of steep paths for less than \$400. Designed by D. J. Stimpson, Air Lugs' studio engineer, mobile workshop is equipped with generator power unit, elec-

trical plug outlets, portable lamps, work bench and vice, rack with all essential tools, drawers containing tools, jacks and other necessary items, for maintenance, fast aid, provisions for kitchen and dormitory, food, fuel and range of utensils and hardware. Top of unit supports erosion for maintenance work in open space.

THESE Aircraft Quality U.S. CARILLOY ALLOY STEELS ARE NOW AVAILABLE FOR immediate shipment:

4120 - Round, flat, square and hexagonal to AIA-QD-5000 as required.
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4200 - Rounds and flats to AIA-QD-1-700 as required.



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each other ...*



Whittaker MOTOR SLIDE VALVES

CONCOR Whittaker's completely integrated facilities with those used by ordinary motor valve manufacturers.

Other manufacturers depend upon outside sources of supply for their solenoids. True, they may be designed to meet your specific requirements, but they cannot also be designed to meet the exacting standards of Whittaker's integrated unit. This frequently results in a compromise valve—a valve that may be acceptable but is not the best possible valve due to limitations imposed by the solenoid unit. Now, compare this with Whittaker motor valves. They are complete valve assemblies that are designed, engineered, built, assembled and tested as a unit. Both valve bodies and solenoids are individually engineered to meet your specific requirements. They are developed at a site, made in the same plant, and assembled and tested together. No compromise need ever be made. You have one source of supply, one source of quality and one source of responsibility. Your engineering, purchasing and scheduling can better be devoted to a more important task—flying aircraft among the leading aircraft manufacturers the world over.

WILL D. WHITTAKER CO., LTD., 215 NORTH CHERYL AVENUE,
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Whittaker

Fleet in Motion
Fleet in Performance
Fleet with Safety First, the Choice in Quality

of a ground-down, large-diameter, slow speed elliptical cam follower, or that of low tip speed, combined with effective and removable light baffles.

The camshaft requirement of slow loading and high lift is itself as complicated as incorporating full span depth and leading edge slotting/recessing slots.

Necessary control for this slow speed condition is enhanced by a novel split roller. Undercarriage fairing which for crosswind landing.

Here, then, is a case prominently beginning.

Let us continue the development to the point where we present scientific knowledge and methods of research to show, and then, in an easy-to-understand manner, the research that will allow it to stop in the air, back up, "change its mind" or proceed at high speed, and thus assure "free sheet-in-the-wind" the following and entire sequence of events that has been selected to firmly establish our position.

► Variable Cam—We have now completed development, by Filton and others in the available aircraft, of landing wheels with a precision utility.

We are seeing the technology develop before our eyes, and if we can only realize it with more speed and greater utility it will begin to grow even though its cost is high.

We come to the consideration of the only variable surface—the gear box, which is the most difficult to design, and greater utility it will begin to grow even though its cost is high.

In a recent presentation, Ralph Bradley and his associates presented an intriguing study of what they call convertible aircraft "Convertible" does not seem quite right, since what we see about is really a complete aircraft that can fly both forward and horizontally.

One of the most interesting research programs in the field has been the application of jet engines in such a way that they encounter air flow movement will reduce a high load on wings for landing and takeoff, which can be diverted into thrust slow for very high speed horizontal flight.

Fortunately these developments, at the moment, are not the optimism that they were, because the Soviets are facing difficulties that high direct lift configuration would do much to solve. The Air Force is loaded with fighter planes that go so fast that they can't maneuver in time to bring them going on target good enough to be effective. If at these same planes were given an azimuthal range of lift from nearly level wings for maneuvering purposes they could be turned in a sufficiently short radius. And the Navy Air Arm looks for carrier usage and for water-borne aircraft degenerately small.

so get away from the high speeds of takeoff and landing that the fighters of today are forced to adopt.

In aircraft breeding, we are facing the rising of pass in aircraft models which are applicable to both military and civilian usage—the gear box 100 down to 10 mph and also the gear of existing planes with minimum stability in a vehicle that will allow it to stop in the air, back up, "change its mind" or proceed at high speed, and thus assure "free sheet-in-the-wind" the following and entire sequence of events that has been selected to firmly establish our position.

We have an NACA Inletivity the function and know how to provide the basic information for an air vehicle which need to individuals.

Index of Translated Technical Papers

Please allow a new economic list of technical translations have been compiled by the Central Air Documents Office, Wright Field, Dayton, Ohio.

List will be distributed as issue leaflets and will include about 700 publications, including 2700 aircraft bulletins in Dec. 1948 volume. Issues analogous to newly required translations will be made at regular intervals.

Like current lists, new index not only will serve as supplement to "Card Index of Captured Air Technical Document" and the "Deck Catalog of German and Japanese Air Technical Documents." But just as well alone as an index to translated foreign air technical documents. It will cover about 10 foreign countries.

Standard Aeronautical Indexing Service bulletins will be issued in running translation which will be handled independently by another under permanent SAIS subject section.

Translations will suffice English and foreign titles and other essential cataloging data. There will be no charges. Highest security classification will be "restricted."

Most of original translations may be obtained from CACD and are available to spouses and relatives of the Armed Forces and to organizations participating ineronological phases of the National Research and Development Program.

CACD and its predecessors, Air Defense and Materiel Divisions, have moved translation services into house. However, new index will be issued leaf feature is expected to provide greatest coverage of translation available as summaries and abstracts held to fit.

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AEROTEC VALVES for any liquid control application



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These valves have been widely used for years on aircraft and are being installed on many current models. They are built to Army-Navy standards and are rugged and reliable in operation.

Write on company letterhead for details, or ask for a field engineer to call.

John P. Murphy, President
THE THERMIX CORPORATION
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If you want the figures, we will be glad to supply them . . . also, the details of why **AVIATION WEEK** is the preferred buy among aviation magazines.



OLD vs NEW—Left photo shows large pile of oxygen tanks supply truck formerly required for B-57 crews in contrast to compact B-57 version of liquid oxygen converter unit alongside. Original converter developed by National Bureau of Standards is shown at right.

Oxygen Converter Saves Space, Weight

One 30-in. × 18-in. diameter unit weighing 60 lb. does job of many tanks requiring considerably more room.

Equipment engineers are getting as much from the National Bureau of Standards as possible.

With a severe limitation of space and weight in high-flying military aircraft, they now must turn to the use of compact, relatively light, fully-enclosed mobile liquid-oxygen converter in place of a large and heavy bottle-oxygen supply.

Converters built on the NBS design by commercial manufacturers are reported to have operated in Navy and Air Force flight tests up to 40,000 ft. ► **Converser System Weight:** Developed by NBS engineers in cooperation with the Navy Bureau of Aeronautics, the new unit represents a source of power, maximum life of 30 hr., at height and in each 15° or 30° dive.

It weighs 60 lb. holds 62 lb. of oxygen—enough for 10 men for 16 hr. The same quantity of oxygen, supplied from gas cylinders at 1000 psi, would require 21 tanks, each 54 lb. or weighing a total of 113 lb. cargo.

Based on the NBS design, a converter built by Eclipse-Pioneer division of Bausch & Lomb Co. is under test at a B-57 in the Air Materiel Command. The bottle-oxygen supply for the craft weighs slightly over 400 lb. in full chassis, while the new one weighs 190 lb. There is an 80 percent saving in weight and volume of oxygen available in

maximum 44 percent.

► **How Unit Functions:** The NBS converter consists of a standard 28-in. tall gas tank. Diesel fuel, modified in addition of a heating device, together with two coils, one for preheat and the other for warming gas as delivered.

When oxygen gas pressure is to be built up, a valve is opened, allowing the liquid to flow through a down tube and trap at the first fixture and into the build-up coil, where it is evaporated and released by the atmosphere.

The warm gas rises through the coil by thermal convection until it enters the top of the tank, where it mixes with the gas above the liquid. After some of the gas condenses, the liquid surface rises and automatically traps the bubbly warmed gas and the cyclic evaporation process begins again.

The process is established, gas may be introduced by forcing liquid through the bottom down into the withdrawal coil, where it is evaporated and passed by the atmosphere as it passes to the outlet atmosphere.

► **Pressure Control:** Oxygen gas in gaseous form is drawn by closure of an automatic bellows-type valve in the build-up coil, which traps the flow of additional gas to the top of the tank. As liquid pressure resulting from heat transmission into the system when it is not operating, another pressure-controlled

valve vents gas directly from the top of the converter to the delivery coil.

When this circuit is open, any surplus of gas above the pressure needed to operate valves is vented to the atmosphere. A pressure relief valve is provided at the build-up coil and in the delivery line.

For flow up to 150 liter per min (5 cu ft/min), gas is delivered within 5 deg C. of atmospheric temperature. Flow rates over 10 liters/min. is great, but the change in gas temperature is negligible.

Pressure may be held up to 10 sec. after the container is filled, from 5 to 65 ps. in 10 sec. The tank is somewhat fragile than the standard Dewar flask and will withstand 200 psi internally.

Pressure relieved is quite stable and although it drops with vigorous shaking, recovery is almost instantaneous.

Depth of the liquid in the container is measured by a differential before type measurement connected between the bottom of the tank and the top of the flask.

► **Without Tank:** To provide one converter to operate in an unpressurized machine a gravity circuit is provided. This consists of a line from the top of the flask, back to the bottom of the delivery coil. It has a gravity-controlled valve which traps when apparatus is inverted.

The converter has successfully withstood tests at the Bureau and other Government laboratories under conditions of severe vibration (1000 cycle per min.), road shocks, impact forces from the application of gravity, severe cold (–140° C.), and severe heat (77° C.) Performance is 95% up to 95 deg. was

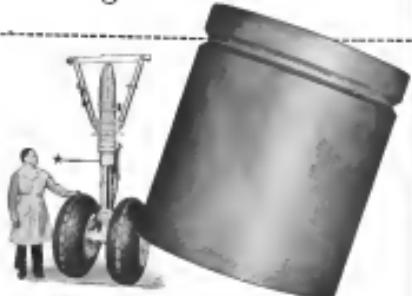
not materially different from that observed in the static position.

When the apparatus was inverted, pressure rise somewhat more rapidly because of the shorter heat path from the atmosphere to the liquid in the neck, but it soon subsides, the pressure rise was not materially different to open the relief valve.

At Forest Trailor Plant—The Air Material Command is using a mobile oxygen liquefaction plant that can be transported by a trailer truck. The trailer can be parked on a corner of the flying field, and with a storage tank, will fill the tanks of planes.

YOU CAN BE SURE... IF IT'S

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Micarta®

CUTS DEAD WEIGHT UP TO 80%

Because Micarta is really
TOUGH!

Micarta helps aircraft fly lighter, 50% lighter than aluminum. More lighter than bronze. Micarta is ideal for static structural parts. In many cases, it does not flex, because Micarta also absorbs vibrations, reduces noise, eliminates shocks. Even without filters, resistance to noise, vibration and corrosion, heat and cold.

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Micarta Filter Book D-1845, or write
Westinghouse Research Corporation, P.O.
Box 606, Pittsburgh 22, Pennsylvania.
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losses at remote bases where oxygen conserving equipment would not be practical, large storage tanks are being designed that will hold as much as 1700 gal of the liquid. Transports of the C-5's type will carry one of these tanks. To transport an equal amount of oxygen is the greatest item world wide. At 4 times the space and about 100 pounds heavier, weight becomes one of the major considerations.

The mobile oxygen liquefaction plant weighs about 94 lb. Each trailer unit is 40 ft long, 8 ft wide, 8 ft high, and has a propane, oxygen, compressor, refrigeration unit and an oxygen group. The pre-pump group

forwards all mechanical power for the air compressor and the refrigeration system as well as electricity for the propane, air separation and the 115 volt lighting system.

Precision Counter Measures Shaft-Rpm.

A new speed-measuring instrument has been developed by General Electric Co., Schenectady, N.Y.

Designed to measure speed of rotating shafts down to 0.001 in our part in 10,000. Once every second it furnishes the shaft's speed during the past second on a liquid crystal screen.

Known as a "precision counter shaft meter," the instrument consists primarily of a small a.c. generator connected to shafts being checked.

The faster the generator is turned, higher the frequency of the current it generates. By measuring frequency electronically over a controlled time interval, speed can then be calculated with extreme accuracy.

Shaft rpm, making it flashed on a series of seven short telescopes connected to generators. Each telescope tube is accompanied by a light, and a switch which is operated on series when light is turned on. Certain of the telescopes light up every second to indicate shaft speeds up to 100 rpm.

New Servicing Dock

Service and maintenance checks on Navy's Douglas R5Ds have been set up at the Naval Air Station, Patuxent River, Md., by a new type maintenance dock.

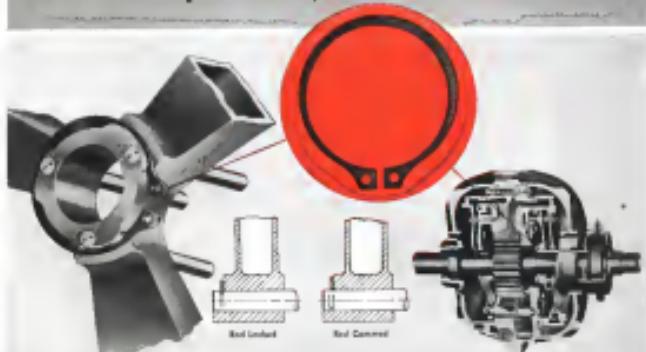
Devised at a cost of \$100,000, the dock features built-in oil-draining and cleaning facilities, engine washing and cleaning, permanent tool racks, and a light system for close-up inspection of hubbed wheel wells and other areas.

While designed specifically for the Navy version of the Air Force's C-45 dock, she can be fitted to the Army's Douglas DC-6. Extra stand can be disassembled and loaded onto plane. It streams for outfit to a new location.

Only one maintenance dock was made by Barron and Barratta Co., Chicago. The more is scheduled for February 1957, when the Naval Air Station, Moffett Field, Calif., and two in Frankfurt, Germany.

Estimated time for tearing down and reassembling dock is around 90 man hours. New dock pays for itself in about 40 days, because of the more labor-saving, maintenance savings and safety features which have been built into it.

Single TRUARC ring holds 3 valve rods, saves \$12 production, 10 hours maintenance



Unique feature of Thomas Vertical Drive design is this valve rod assembly, which permits removal and replacement of rods without disassembly of entire rod. One TRUARC ring holds three rods, thus giving greater economy provided one side only of each rod. When installed

100% rods not like ours, spread the ring, permit their easy removal. Ends of replacement rods are tapered for easy assembly. This design saves as much as 10 hours of dismantling and assembly time, and eliminates the costly delay of reworking the rod in the factory for repair.

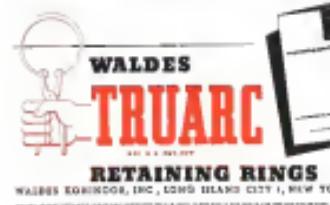
Use of 8 Waldes Truarc Retaining Rings is an estimated production saving of \$12.00 per valt, reports Thomas Hydraulic Speed Control, Inc., of Wichita, Kansas.

Savings in production materials and time, plus simplification of repair procedures with Waldes Truarc Retaining Rings tell only part of the story for Thomas Hydraulics. In their own words, "Considerably less skill is required in valve assembly, disassembly and repair of assembly of the drive than would have been required if the design did not use Truarc rings."

"Our use of Truarc Rings has eliminated surface

holes in a more economical design that permits several holes pricing. Easier manufacturing also provides an additional sales point."

Truarc can cut costs and improve your product, too. Wherever you use machined, rolled, cast, bolted, riveted rings, consider how there's a Truarc ring that does a better job of holding things together. Waldes Truarc Retaining Rings are precision engineered, easy to assemble and disassemble. Only Truarc rings circulate always, to give you a self-lubricating grip. Send us your drawings. Waldes Truarc engineers will be glad to show you how Truarc can help you.



Waldes Engineers, Inc., 47-25 Astoria Place
Long Island City 1, N.Y. 11101

Please send 10 page Data Book on Waldes Truarc Retaining Rings.

Name: _____

Title: _____

Company: _____

Business Address: _____

City: _____ State: _____ Zip: _____



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Lower your costs with

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Problems to supply 18,000-h.p. a.c. power for testing instruments and operating the controls of Bell bombers stand on the ground—without running the six 3,000-h.p. engines that normally supply it at the site.

Another that compact, reliable and weightless Jack & Heintz auxiliary power unit—another example of J & H ability to meet specialized aviation needs. @ 3 kva, 400-cycles, 120/200-volt, 5-phases, a.c./ph-21-amps, 20-volt, d.c. output is supplied from 60-cycle, 230/460-volt, 3-phase, a.c. input. Cart mounting illustrated as optional.

J & H engineers specialize in cooperating with aircraft engineers in developing equipment ranging from starters to complete systems. Why not take advantage of this service yourself? Write us today, outlining your problems.

Aviation Division • JACK & HEINTZ PRECISION INDUSTRIES, INC., Cleveland 2, Ohio

NEW AVIATION PRODUCTS

Spray-Craft Finish

"Spray-Craft" aircraft finish offered by Monogram Chemical Co., St. Louis, Mo., treats cleaned sections of certain materials used in aircraft painting. It is a foam-emulsion having high viscosity, and requires only 4 to 5 gal./gallon. Characteristics of ordinary finishes on spraying and drying much have been known to peaked almost immediately, but after spraying with Spray-Craft, operations continued no difficulty. Company says Bell Aircraft Corp. already is applying product to all commercial helicopter having in factor and has recommended it to its commercial operators that Spray-Craft for refreshing exterior surfaces on craft.



Relay Variety

Complete line of hermetically sealed relays made by Autonics Electric Co., 1013 W. 10th, Beach Street, St. Paul, Minn. 7, II, are represented by ultra-compact, hermetic, and miniature relay requirements demanded by armed forces specifications. Relays are available for hermetically sealing in various sizes and shapes of enclosures which are designed to meet practically any engineering requirement. By type of relay, series gripping, mounting specifications, and space limitations. Relays available will accommodate operating potentials from a fraction of a volt to several thousand volts. Contact ratings can range a few milliamperes to several hundred milliamps. Operate under voltage from 1/300 to 1000 F.



Hydraulic Power Unit

For press applications, charging, shearing, static testing, picking, pulling and other forming, the G-1000 portable hydraulic power unit developed by Sprague Engineering & Sales, Gardena, Calif., operates on 100-volt AC power supply to provide hydraulic pressures from 1000 to 30,000 psi.

Unit makes possible rapid rate travel to demand tonnage and return in matter of seconds. Hydraulic pressures are controlled by regulation of air inlet pressure.

Developed primarily for car with cold, pump size is available with special feature of standardized parts for easy assembly and interchangeability. Pump has 8 in. dia. at 10 in. high and weighs 20 lb. If available as separate unit or in power unit, Model G-1000 which includes pump, reservoir, pressure gauge and necessary control valves.



Finish Saves Tubing

"Pinstripe" electric weld steel tubing, coated with plastic melt extruding finish, is available in standard sizes and lengths, according to James F. Laughaan Steel Corp., Dallas, Tex. Material can be fabricated by bending, expanding, flanging, squatting, flaring, and flattening, without drawing, to cont. 1000 ft. Finish is Vinylite predispersion.



Flexible Sander

An electric belt sander manufactured by Belts & Tools Corp., 21 W. Apple St., Dayton 1, Ohio, is designed to fit, even in concave surfaces. Device can be used for finishing sheet metal, solid casting and all types of materials in auto, metal, basic metals, solder, aluminum and magnesium. Unit also is suitable for finishing and sanding wood products. Monolithic sanding belt last one month, undergoes non-destructive tests at automatics 4 times.

Engineering Aid

For engineers, draftsmen and technicians, vinyl pocket combination protractor, compass, square, set square and lettering tool is available from L. A. Gobin, 1002 N. Broadview Ave., Des Moines, Iowa. Guide-scales and drafting tools we sell are represented to be accurate to .0002 in. Device is made of clear plastic and is reported not to warp, burn or distort.

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IN PLANES HEAVY OR LIGHT...**



**there's more HPR[®] in
PACKARD
high-altitude aircraft
IGNITION CABLE**

Packard high-altitude aircraft ignition cable is sure to give you more hours per replacement—because it is engineered to do just that. Into its design and manufacture we have poured all the specialized skill, all the know-how, gained during years of leadership in cable development and progress. Here, there, this is cable that meets the exacting demands of the aviation industry. Here is cable that stands as the industry's standard of comparison. Here is cable superior in its resilience to heat and cold, to abrasion and vibration, to corrosion and age.

For outstanding reliability . . . for notably excellent performance under extreme atmospheric conditions . . . for the most HPR[®] . . . specify Packard high-altitude aircraft ignition cable.

*Means Per Replacement

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PACKARD ELECTRIC DIVISION
General Motors Corporation
Warren, Ohio

PACKARD 530

South Pasadena, moving the South Pasadena operations to the Van Nuys plant. Consolidated will use the name Masquadi Aircraft Co., and will be headed by Bay Masquadi, president and general manager; and M. M. Goff, vice-president.

Ryan Aeromarine Co. has booked \$1 million in new business for its aircraft products division in the past 30 days, principally exhaust systems for military and transport planes and steamless shore engine components.

Piper Aircraft Corp. has been reorganized with Transocean Airlines Ltd. as Canada in the seventh division of the organization, and will continue to make Piper and Stearman aircraft in Canada, at the Cobb plant at Beauport, Ontario. Gordon Elkins, former chief officer of Western Airlines, Toronto, has been named manager of the aircraft division.

Chase Night Aircraft division of United Aircraft Corp. has recently completed its move to Elkhorn from Stratford, Conn., with all employees and equipment and consequently expected to be served by June 30.

Consolidated Vultee's San Diego division has won its third National Safety Council award for lead production efficiency without a doubling injury to an employee in 2,253,574 man hours from Jan. 29 to Mar. 15. It is the only aircraft company and one of two manufacturing companies west of the Mississippi to receive the award.

General Electric is building another plant in the south to meet demand from WAC at Waco, Tex., for production in Air Force contracts and is expected to employ 800 workers by year's end.

WHO'S WHERE

Westinghouse Electric Corp., Pittsfield, elected James H. Jowett, manager of Apparatus Sales, and John M. McElroy, assistant to the vice president and manager of Advertising and Sales, to the board of directors. Herbert P. MacDevitt, treasurer, was elected assistant manager. He also has been appointed credit manager.

Curtiss-Wright Corp. named L. L. Holopak, formerly superintendent of the Columbus plant, replacing J. G. Wender, now on leave of absence. Previously, Holopak was assistant to E. F. Brown, factory manager.

United Aircraft Corp. appointed Albert B. Walker as assistant manager. Walker is in the Helicopter Standard Propeller division contract advanced tools department.

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Latest Air Force Bid Awards

As Major Command procurement Division makes available to AVIATION WEEK the latest bid awards shown on the page, requests for further information should be addressed to Contracting Officer, AMC, Wright-Patterson Air Force Base, Ohio, 45433-47997; (AMC will respond to the source of data on substitute bid lists.)

AMERIMAC

For 4000 seats Boeing catalog 140-41701: Martin & Lewis Co., New Bedford, Mass., \$1,000,000.

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The 1958 long-haul aircraft, 140-18900: Lockheed Corp., Burbank, Calif., \$1,000,000.

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SALES & SERVICE



New Three-Placer to Sell at \$2500

All-metal plane with claimed speed of more than 150 mph. has folding wings as standard equipment.

By Alexander McFarley

A new all-metal three-place mayfly-gar personal plane with folding wings and a V tail, and priced at \$2500, has been announced by Jerome Aeroplane Co., Deland, Fla. It is named the Jester.

C. M. Januson, Isaac Beach and Cobe Rogers, who back the new company, quote a running speed of 150-170 mph. as a baseline, and a rate of climb of 400 ft/min. for the top speed. The plane is powered with a 175 hp Lorraine O-255-CI engine driving a fixed-pitch Savinck wood propeller.

Flight Test-Pilot is well situated in its CAA-type certification flight test. Ross Holdeman, test pilot and sales director reports. Production is proceeding on the first 10 planes, scheduled for delivery by the end of July. With present manufacturing facilities at Deland Aerodrome, it is planned that production will be increased within three to five months to a rate of 40 to 50 planes a month.

Holdeman and the Jester will be sold at the \$2500 figure with standard equipment including:

Choice of four color combinations (dark blue, dark green, tan with russet trim and russet with tan trim), fully retractable electro-mechanically-operated biplane landing gear with 630 x 6 wheels (front and rear), hydraulic brakes, starters, generator, battery, navigation lighting, landing lights, cabin heater, complete soundproofing, full upholstering, full upholstery, fixed perch wood propeller with spinner.

other flight characteristics of the airplane to achieve sparrow-droopcock certification are to go into service with no controls at 40 mph.

Holdeman says that the plane has excellent stability, and rates nicely air without any tendency to "haze." Prototype model uses stick control but production planes will have wheel control cables.

► Wide Spans—Cabin is entered through after side, through doors 45 in high and 36 in wide, and the seat is 48 in.

To skeptical comments about the unusually low price for an airplane of the performance and construction described, director of the Jerome company replies: "We are not looking on the price and have closely considered our rights to make deliveries at this figure." Priced, incidentally, without fuel oil and fuel supply for twenty.

Deliveries are being arranged by Holdeman and Holdeman with a number of operators, as a "service bureau," basis, with emphasis on a policy of continuing service to purchasers of the airplane.

\$125,000 Spray Job

Orville Arnold, Inc., of Yakima, Wash., has completed a 10-day aerial spraying of 1,662,000 acres of Oregon forests in a \$125,000 project which involved eleven planes and three heli-copters.

Alvin Aune and Herman Fossie directed the operation, with 28 men under them, working from five fields. Work had to be completed in 10 days, because that marks the breeding period of the locusts, a small pest which thrives on fir buds and can destroy a forest within three years if not stopped in time.



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BRIEFING FOR DEALERS & DISTRIBUTORS

HELICOPTER RIVAL—Source in Deland, Fla., says that the three-blade Pterodactyl prototype (described on previous page) is doing more than landing and taking off and slow flying that are something to watch. Test pilot Paul Hellebrand marked out a 100-ft. circle on the airport and has been doing it end over end of that. While landing speed is officially quoted at "below 40 mph," local sources say the plane flies much slower actually.

CAPT. MAX CONTINUES—Aeronautical Training Society selected Capt. Maxell W. Bellone of Spartan School of Aeronautics, Tulsa, Okla., president, at the recent meeting in Dallas. It also retained Wayne Wensler as secretary and James O'Brien, L. E. Hall, president of Parts Aircraft Sales & Service, East St. Louis, Ill., as new director-at-large.

Delegates voted in addition to Bellone and President F. Merritt Anderson, Milwaukee; William J. Long, Dallas; Hal Darr, Chicago; and Devereux M. Davis, Atlanta; William J. Graham, Pittsburgh; E. C. Mosley, Cleveland; Carl A. Liedtke, Lakeland, Fla.; Harry S. White, Tulsa, Okla.; Carl W. Wiley, N. Raynor, Daytona Beach, and Clarence Page, Oklahoma City.

AVIATION DEVELOPMENT—If CAA Administrator Del Knotted gives his new Director of Aviation Development, Wiley Wright, some authority and does not permit his program to be blocked by machinations in Washington and in the field, it seems likely that private flying may benefit considerably from the creation of the new office. General Order No. 3 signed by Knotted sets up an aviation program for the new development office. Try to watch as the aviation extension division, where held a not so secret, is charged with developing programs and carrying them out. It could be either a strong base to help light planes and lead imports out of their difficulties, or put another domino for government control!

LIGHTPLANE BRIEFS—Walter H. Birch, president of Birch Aircraft Corp., recently made delivery of the 100th birch plane, Bear Bonanza to V. B. Lutts of Flying L Ranch, Durango, Colo. Comes a crediting letter to Lee Alford, San Witchita, as an Ed's first installation for the new all-metal Republic 17B. Custer also announces that it delivered the 100th Model 17D recently to King Creek, San Bernita, Texas distributor.

Lucasville Airplane Corp. is equipping its new workshop with stainless steel mufflers, as standard equipment. National Aeromarine Corp. reports that production of VHP Glass Range convolvers for the small Navy VHF navigation receiver designed for use in personal planes was to be doubled in June with a new assembly line and virtually double the number of workers previously assigned.

BELOW SAFE ALTESTUDIES—Probable cause of the fatal crash of a four-place Beech Bonanza near Cheerywood Airport, Shreveport, La., last Dec. 4, was pilot's attempt to minimize visual contact in poor visibility by flying before minimum safe altitude, the CAA reported. Last week Pilot Ken Kornblum had approximately 1850 hours, including 250 hrs. at night and 450 in the Bonanza. Plans struck a tall pine tree, crashed and burned in a wooded area eight miles from the airport after circling for approximately 45 minutes in the vicinity of safety. There was no evidence of mechanical failure or不负责任 of any part of the airplane prior to crash, CAA reported.

SAPFORD NAMED—E. S. (Ed) Selford, formerly Beech export sales manager, has been advanced to sales director for the company. E.S. recently left by magazine some time ago by Lee H. Smith.

—ALEXANDER MCSURLEY

AIR TRANSPORT

Rickenbacker's Proposal Scorned

Woolman says offer to take over five carriers is bid for monopoly, while Putnam calls it cannibalization.

By Charles Atiles

A defense of cold water has descended on Eastern Air Lines President E. V. Rickenbacker, who has proposed to merge his airline with the remaining 150 smaller airlines in rail pay by taking over five competing carriers (Aviation Week, June 5).

Delta Air Lines President C. E. Woolman and Chicago & Southern Air Lines Board Chairman Carlton Putnam have vigorously denounced the plan. Civil Aeronautics Board Chairman Joseph O'Connell has suggested pointedly that there may be more to it than meets the eye.

► **Woolman**—Rickenbacker, as a lawyer to Sen. Estes Kefauver (D-Ga.), Chairman of the Senate Interstate and Foreign Commerce Committee, offered to operate the systems of Delta, Chicago & Southern, Capital, National and Colonial Airlines if CAL's non-airline rail rate. Woolman, in a scathing reply, wrote Sen. Johnson:

"The greenhouse proposal contained in [Rickenbacker's] letter should be rejected as no more than shaded advocacy, the self serving effort of Eastern Air Lines to assert and enlarge the comfortable monopoly which it over enjoyed."

The capitalist short, with the exception of Capital Airlines, off the competition which Eastern proposes to operate as within the competitive schedules. We have no objection to the expansion of Eastern's system. CAL is presently rocketing an extension of its routes in the Pacific Coast, but it has not, as yet, proposed to operate the routes of higher and more serious living as we see it.

"It is felt reduced to chronic income pictures through the popular appeal of offering rail pay savings to the general public."

► **Debtors of Minneapolis**—Woolman declared that Eastern's proposed merger would sharp focus the basic issue of whether this country wants monopoly with its resultant price of attenuated public service, or whether it wants the advantage of competitive intelligent airports. CAL's proposal shows that complaints against Eastern's service were frequent in the days before the Board ousted the competition which it found was needed, the Delta president concluded.

"It is further advised that CAL's



CARLTON PUTNAM If he believed in monopoly, he'd take over Eastern.

will to serve the public has sharpened since competition was created. We have good reason to believe that Eastern is already engaged in concentrating an abnormal competitive effort against Northern Railroads.

"Eastern is buying an unprecedented amount of advertising in Northeast and Delta cities and is increasing the frequency of its competitive schedules. We have no objection to the expansion of Eastern's system. CAL is presently rocketing an extension of its routes in the Pacific Coast, but it has not, as yet, proposed to operate the routes of higher and more serious living as we see it.

"It is felt reduced to chronic income pictures through the popular appeal of offering rail pay savings to the general public."

► **Debtors of Boston**—The Board chairman said that Eastern has paid well before CAB application for \$1.45 per mile and per ton for its Miami-San Juan, Puerto Rico route (increased to its domestic rate of about 65 cents a ton-mile).

An editorial in the (St. Louis) *American* to the effect that the Board's proposal of north-south air transportation in the territory east of the Mississippi will impair local service, O'Connell told Sen. Johnson is using a creative approach in Eastern's proposal.

► **Latin America**—Meanwhile, CAL took steps to protect itself from alleged threats in its Latin American business. It filed CAB for a test set work of new routes from New York

routes from Boston, New York and Washington to Athens, New Orleans and Houston, from Boston, New York and Washington to all Florida points, from Detroit, Cleveland and Pittsburgh to the South, and from St. Louis and Memphis to the east and south. All indications were our good and public service to our users, we would make the offer.

► **Sold for Eastern**—It can be too easily overlooked that Eastern already has a valuable and continuing subsidy. This subsidy consists of the retentive of public convenience and necessity which it holds for highly profitable routes between large revenue-producing cities.

"We must not shape our national air transport policy on the basis of the present economic environment in which our own name stands at a great premium," he said.

► **Petnam Cannibalization**—Chicago & Southern's Putnam also underscored the dangers of monopoly. He said that Eastern, having reached full influence through government aid, is now at "temping to expand by swallowing other carriers."

CAB Chairman O'Connell wrote Sen. Johnson that Eastern's profit situation did not mean to him that Rickenbacker's new proposal, O'Connell felt, did not fit into Eastern's plans to increase and expand New York holding interests and down "monopoly costs" by taking over Northeast Airlines.

These conditions included cancellation of NEA's present subsidy-cash rates for at least three years, closure of a number of bases on Northeast rail routes, and assurance (payable from CAB) that no competing airline would profit Northeast's routes. "I had not realized before [Rickenbacker's] statement that Eastern's plan is so much less favorable to us," O'Connell said, "to mention the apparently unprofitable offer for the center of the States," O'Connell observed.

► **O'Connell Asks Caution**—The Board chairman said that Eastern has paid well before CAB application for \$1.45 per mile and per ton for its Miami-San Juan, Puerto Rico route (increased to its domestic rate of about 65 cents a ton-mile).

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technological matters, spending probably more time in the field than in transport industry," STL declared.

It would appear that unless the technological improvements are contracted to principles, the industry will be caught in a vicious circle of ICAO standards and requirements, U.S. Civil Av Regulations, and industry operating requirements, none of which will even catch up with the others.

The U.S. government, it would be noted by an international standard, will be extremely reluctant to make changes in its own regulations even though dictated by technological progress and proliferation of the entire world's aircraft. Similarly, manufacturers are probably preoccupied protecting as far as possible sufficient procedures by virtue of the international standard.

The Civil Aviation Board, through the Air Conditioning Committee, has advised ICAO that it has prepared a number of proposed standards and practices covering scheduled international routes. AGC is sympathetic with ATA's point of view but believes most of the difficulties lie with the U.S. committee and will be treated with

ALPA Lays Gander Crash to GCA

Controversy over the accuracy of GCA has developed during investigation of the non-fatal accident at Gander, Newfoundland, on the night of May 12 when a TWA DC-4 carrying 24 passengers struck the ground 1600 ft short of the runway.

Chief cause of GCA procedures in general and the specific technique used to guide the TWA pilot at Gander is the Air Line Pilot Act.

ALPA spokesman Donald Sabley of TWA charged that the Gander CCA did not warn Frank Saylor, pilot of the damaged TWA DC-4 that he was dangerously low just before the plane impacted a power line and hit the ground. The chief of the review committee was set up for Canadian Transport Board hearings of CCA operators and an investigation of the limitations of GCA equipment.

Baker, Gander Path-Operations of the Gander CCA, maintained by Pan American Airways under a joint agreement with other U.S. and foreign airlines using the field, testified that they warned Saylor repeatedly that he was from 10 to 70 ft below the glide path during final approach and that he remained below the glide path during his initial approach. Gander control tower operator John W. H. Smith, however, denied all such warnings to Saylor. The CCA operations and they were not able to determine on their scope when the TWA DC-4 hit the power line, trees and ground 1600 ft short of the

runway and were unaware of any impact to the plane until after it landed.

The GCA glide path is 45 ft above the surface of the ground at the DC-4 hit. The runway is 30 ft above the ground which slopes down from the runway to the shores of Gander Lake and 15 ft above the runway level. GCA agents was notified they warned Saylor he was 50 ft below the glide path less than a mile from the runway and the Angus Enterprise omnibus recorder on GCA equipment showed the plane to be 35 ft below the glide path in a sudden drop less than a mile from the runway.

The second impact of the plane was before the glide path from the point of impact to 1600 ft east of the first. Pilot, Tollekson—Testimony by Pilot Frank Saylor revealed that he used a standard CCA approach to Gander with a weather forecast at 300 ft visibility, visibility of 3 nautical miles and 1000 ft ceiling and fog. The DC-4 went into clouds at 7100 ft and picked up heavy fog on the windshield. Alcohol was applied to assist the windshield but the cockpit window was defective and sprayed alcohol and water could not be stopped.

At the third and final stage of 1600 ft above the ground, the DC-4 broke out of the cloud. Saylor said he could see the Barlow high intensity approach lights and the end of the runway through a small semi-transparent portion of the windshield. He did not use the emergency clear vision panel to improve his visibility because it was placed against operators when gear and flap were down. Because of anticipated engine inoperative damage.

► Both Gander Path-Operations of the Gander CCA, maintained by Pan American Airways under a joint agreement with other U.S. and foreign airlines using the field, testified that they warned Saylor repeatedly that he was from 10 to 70 ft below the glide path during final approach and that he remained below the glide path during his initial approach. Gander control tower operator John W. H. Smith, however, denied all such warnings to Saylor. The CCA operations and they were not able to determine on their scope when the TWA DC-4 hit the power line, trees and ground 1600 ft short of the

runway.

Saylor and his co-pilot had descended from 130 mph to 110 mph and left the right wing dip and roll. He reported that after the turn he came out of the ground and then became airborne again. He continued on his level on the runway with wings damage to the plane. The DC-4 nose wheel broke the power line 1600 ft from the end of the runway then both wings and gear sheared off mass for 300 ft. The right wing hit a mound of dirt and crumpled upward just before the plane again became airborne. Saylor and his co-pilot testified that neither was aware of the power line's location.

Saylor and his co-pilot said that he could

have completed a normal landing if he had not relied on GCA after he broke out of the overcast.

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14

IATA Conference

(McGraw-Hill World News)

BURGENSTOCK, Switzerland—International Air Transport Assn.'s third annual technical conference ended here after 10 days, with more than 80 items facing on the agenda.

Subject of each agreement was some model of specifying minimum performance requirements, performance requirements for Category I aircraft, and standardization issues, such as approach landing lights, position lights as well as aircraft lights.

More than 100 delegates from a score of countries concluded a symposium on the DC-9 with representatives of the manufacturers. Views and information also were exchanged on possible use of helicopters as a link between airports and urban centers.

SHORTLINES

► Alaska Airlines—Has received CAI authorization to make its passenger planes fly between the U.S. and Israel during the period from June through October.

► American—Has leased 35,000 families and 75,000 individuals under its first-of-its-kind family live plan during the past eight months. An AA survey disclosed that 64 percent of the family group passengers would not have traveled by air had the fare reductions American wants to extend the plan to Mar. 10, 1960.

► British—W. T. Medfield has become director of maintenance and engineering at London's R. H. Vowles Ltd.

► BOAC—Has increased its trans-Atlantic service from six to seven flights weekly.

► Coastal Air Lines—Has received a CAI exemption to make a DC-4 per stage flight from New York to Israel. CAI is a large irregular carrier based at Newark.

► Culver—Lost \$116,000 between Mar. 1, 1948, and Apr. 30, 1949, on its routes from New York and Washington to Brazil due to high freight rates and poor pay.

► Pan Tiger Line—Expect to share a slot for the fiscal year ending June 30. Company was in the black for the last half of 1948.

► Mid-Continent—Reports \$14,202 net profit in April against \$14,227 in the same month last year. Operating expenses increased 7 percent, and freight traffic hit an all-time high. A CAI examiner has recommended that MCA be denied an alternate route between Kansas City and New Orleans via Springfield, Mo., Little Rock and El

Dorado, Ark., and Monroe and Baton Rouge, La.

► National—Showed a \$494,386 net profit in April, bringing its earnings since Nov. 1, 1948, to \$1,986,070.

► Pan American—Has received CAI authorization to commence service with 10 aircraft from U.S. gateway to points in Latin America with one flight round-trip possible twice-weekly working services.

► Southern Airways—Inauguration of feeder service was postponed from June 1 to June 10 because of delays in receiving right to issuance and activation of stations.

► Trans-Caribbean—Has been denied CAI exemption to provide regularly-scheduled coach-type flights between New York and Puerto Rico pending a Board decision on route certificate application for the airline's two aircraft.

► TWA—T. S. Edwards, president during the Midwest Day weekend was the longest in history, exceeding last year's lead by 11 percent—company earned a capacity 50-passenger load out of New York on its first Stratojet coach flight to Pittsburgh and Chicago June 1.—W. E. Trimble has been named director of aviation Europe, replacing E. T. Bolten, who resigned to become vice-president of Philippine Airlines.

CAB SCHEDULE

June 10—Last segment on CAB's trans-Atlantic schedule on the night flight route Denver-Bogota via Atlanta.

June 10—Beginning of hearings in re-optimal transatlantic route (Marine 801) at 100th CAB meeting in New York. The hearing is to determine whether trans-Atlantic fares longer than 10 hours will be charged to the carrier present. Duration, 10 days.

June 10—Starting on design of carrier-grade switches for mobile telephone systems (Marine 878).

June 10—Beginning of hearings in authority instrumentation route case. Participants: Pan American, Pan Am, and Pan American.

June 10—Continuation of hearings in authority instrumentation route case. Participants: Pan American, Pan Am, and Pan American.

June 10—Continuation on Green Air Service's bid for trans-Pacific (Marine 1022).

June 10—Provisional confirmation in all directions of new trans-Pacific routes and discontinuation of existing ones (Marine 1023). All new routes will be determined by government body responsible for planning. Confirms CAI ruling. Duration, three weeks.

June 10—Continuation in Yul Air Lines and Trans-Asia Airways route case. Participants: Trans-Asia, Yul Air, and Pan American.

June 10—Continuation of hearings on authority instrumentation route case (Marine 1024). Also: Discontinuing on British West Indies (Marine 1025).

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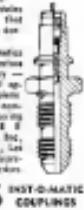
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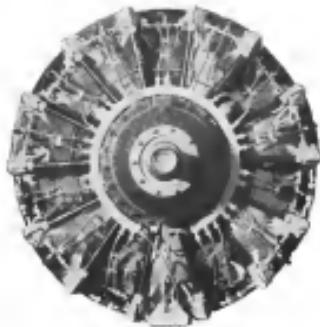
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EDITORIAL

More Shifts at CAA

Administrator Del Renthal has been in charge of the overstuffed, unwieldy, politically-muddled Civil Aviation Administration for about a year. During most of that time the big government agency has been staffed only a scattered bunch both in Washington and in the field, the like of which has never been seen since the Civil Aeronautics Act was passed in 1938.

Proposed are that something and another will continue for several more months, at least, at lower orbited changes all made. But top executive shifts with few exceptions, now appear to be crystallizing, under no conceivable made last week.

Appointment of Donald W. Nyrop from executive contract to deputy administrator for operations, definitely puts him in CAA's No. 2 spot. Fred B. Lee, the other deputy administrator, is now assigned to "coordinate planning of Washington office programs and evaluation of regional performance."

Ronald M. Strohba, who has been director of base area management, is being named executive assistant to Renthal, Nyrop's previous position.

Appointment of Capt. Charles F. Horne as director of federal airways, replacing William E. Kline, puts a positive advocate of CAA as top man at airports, and thus may mean a much stronger CAA leaning toward this type of landing aid, as opposed to CAA's traditional staunch support of the ILS. Horne had been Renthal's special assistant in navigation problems, and is author of a Navy report favoring CAA.

The new international region created by Renthal and headed by Al Koch coincided in many respects to the old foreign operations office, which Koch at one time headed under Administrator T. F. Wright.

Complaints about vacuum in regional technical decisions have been answered by a decision to put representatives from the Washington technical review office on regional boards for approval of new aircraft in an effort to get greater uniformity of engineering ratings in the various regions.

Admittedly, the Renthal upheaval is the most drastic that CAA has ever seen. If the greater efficiency long demanded by the aviation industry in CAA can be attained by this shakeup, it will have been justified.

AIRWAYS WEEK will watch Mr. Renthal and CAA closely in coming months, wishing success to both. The Administrator has had to fight an unusually high crop of critics, even for CAA, ever since he assumed office. We find that he should fight them more valently. Far either the Administrator or AIRWAYS WEEK is destined to ignore their caustic words would be futile. Both know they exist. This situation need not continue.

The Administrator must act out to prove himself to be a sincere friend of all other branches of aviation as well.

ROBERT H. WOOD

the scheduled actions whence he comes. He knows about the sources of "international duals" in equipment, and should answer them fully, to set them at rest. We feel he did not react that issue squarely and completely in earlier statements. Certainly he must be asking every effort not to be tagged as favoring any particular commercial aviation service organization, or any nonmilitary form of equipment. He must stand strenuously against urging for CAA employees who are on the payroll of the airlines' wholly owned communications company, Aerostar Radio, Inc., of which he was formerly president. Until Mr. Renthal does satisfactorily dispose of such regards, once and for all, he will be working against powerful and unnecessary odds. We hope he destroys the monos once and for all. CAA and U.S. aviation need a strong administrator of civil aeronautics and perhaps Mr. Renthal will prove to be that man. We hope so.

Mr. Johnson Reconsiders

Lois Johnson, Secretary of Defense, last week rescinded the notorious "Confidential Directive No. 1" of April 14 which gave notice that all information released from the Pentagon would thenceforth be screened not only in the interest of national security, but also for "policy and propriety."

AIRWAYS WEEK, on this page May 7, deplored this new retouching of censorship in an editorial, "Mr. John isn't news policy bog down."

According to William Foye, Mr. Johnson's public relations director, announcements now will be covered by the "existing security review regulation."

We welcome Mr. Johnson's reconsideration of a decision often decried, and we hope several other alarming indications of a strangulation of public information can be eliminated in similar decisive fashion.

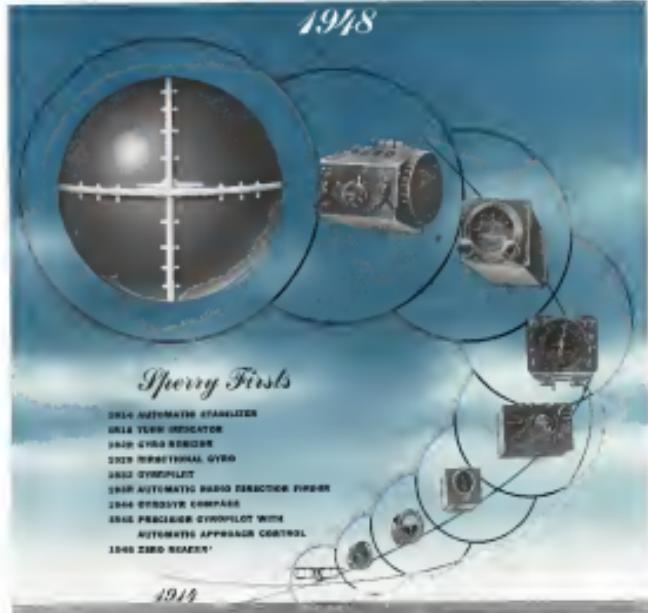
Dr. Compton Appointed

With election of Dr. Karl T. Compton as a director of McGraw-Hill Publishing Co., AIRWAYS WEEK will come to the council of a third outstanding advisor well known to aviation.

Dr. Compton is chairman of the Research & Development Board of the National Military Establishment, and chairman of the corporation of the Massachusetts Institute of Technology. Until recently, he was president of M.I.T.

Already among AIRWAYS WEEK's consultants were Dr. Jerome Hunsaker, head of the department of aeronautical engineering of M.I.T., and Eugene Wilson, now chairman of the board of the Arnold Engineering Annex, and formerly chief of staff to the late Gen. Adm. Joseph M. Reever. For years, Mr. Wilson was president and vice chairman of United Aircraft Corp.

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